



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

D2893-1
Job Sheet 173685



Part No: D2893-1

Job Qty: 10 ea

Part Name: Support



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 3/6/18

Job Tracking No:

Due Date: 3/16/18

Created By: Marie Lajeunesse

Type: SOLD

Description:

Note: DWG REV C IPP: C 02.11.26 Reformat; Added P/O KJ IPP D 06.04.19 removed alodine EC IPP Rev:E Added priming as per Rev B 07-04-30 JLM IPP F 08.03.19 Re-format EC verified by: DD IPP Rev:G 08-05-15 add QC14 DD verified by:EC IPP Rev:H 11.08.04 as per dwg rev.C DD ver:EC

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	10 Ea	3/15/18	3/15/18	0.00	0.00	Start Up Machining-1		SBL 18/03/18
100	CNC Vertical Machining	10 pcs	3/15/18	3/15/18	0.33	19.61	HAAS1-2		SBL 18/03/18
120	QC	10 pcs	3/15/18	3/15/18	0.00	0.00	QC8 Machining-1		18/03/18
130	Crosstubes	10 pcs	3/16/18	3/16/18	0.00	1.67	Crosstubes-2		✓ ASB MAR 19 2018
140	QC	10 pcs	3/16/18	3/16/18	0.00	0.00	QC3		38
170	Packaging	10 pcs	3/16/18	3/16/18	0.00	0.00	Packaging3-1		ASB MAR 21 2018
180	QC21-SA	10 Ea	3/16/18	3/16/18	0.00	0.00	QC21		9-88 MAR 21 2018

Part Op 100 - 1-Machine as per Folio FA081

Descriptions: 130 - Per note 8 on page 1 of dwg D2893, Prep inner concave surface of support and apply 3M Scotch-Weld as per dwg.

170 - LOCATION: LG050

M138381

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
DSK078	D2893-1 Turning Detail	5 Ea (.5 ea)	90-Start up Operation	

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	DSK078	5	6	0

55051388

Part Specifications

Spec No	Description	Target/Tolerance	Limits	Type	Special Comments
1	2.750 Support	2.985Inches	+ 0.020 - 0.000	3.005 2.985	
2	2.750 Support	0.440Inches	+ 0.020 - 0.000	0.460 0.440	
3	2.750 Support	0.125Inches	+ 0.035 - 0.000	0.160 0.125	
4	2.750 Support	0.040Inches	+ 0.020 - 0.000	0.060 0.040	
5	2.750 Support	0.188Inches	+ 0.005 - 0.000	0.193 0.188	

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION		AGAINST DEPARTMENT/PROCESS							
	Rework	☐	Skid-tube	☐	Cross tube	☐	Water Jet	☐	Engineering	☐
	Scrap	☐	Machining	☐	Small Fab	☐	Prod. Eng. Coord.	☐	Quality	☐
	Use-as-is	☐	Thermoforming	☐	Finishing	☐	Rec/Store/Packaging	☐	Other	☐
	Suspected Unapproved	☐	Large Fab	☐	Composite	☐	Supplier	☐		

Date :	Step #:	QTY Effective :	MRB (QSI042) Approval
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Description Work Order Deviation	Disposition
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Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkebury, ON T6A 1K7
CANADA
TEL: 1 813 632-8200
Email: sales@dartaero.com
www.dartaero.com

Date: 03/14/18

Root Cause							
Environment	☐	No Re-verification	☐	Pressure/Forced	☐		
Design	☐	Operator	☐	Bending	☐		
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐		
Equip/Tooling	☐	Supplier	☐	Cracks	☐		
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐		
Material	☐	Use for Testing	☐	Cuffs	☐		
Internal Transport	☐	Poor Information	☐	Crushing	☐		
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐		
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐		
Substation	☐	Process Improvement	☐	Marks/Chatter	☐		
Past Expiry Date	☐	Manufacturing Process	☐				
Misidentified	☐	Past Due	☐	OTHER :			



Container No: S051388



Part: D2893 - 1

Job No: 173685

Serial No/Batch: S051388

Revision:

Inspector:

Cut too short

Instructions Incomplete/Unclear

Drill Holes

Mislabeled

Fit/Function

Misaligned/off center

Finish

Misread

Turning Sequence

6	2.750 Support	0.125Inches	+ 0.035 - 0.000	0.160 0.125
7	2.750 Support	0.140Inches	+ 0.020 - 0.000	0.160 0.140
8	2.750 Support	1.360Inches	+ 0.040 - 0.000	1.400 1.360
9	2.750 Support	0.040Inches	+ 0.020 - 0.000	0.060 0.040
10	2.750 Support	1.190Inches	+ 0.040 - 0.000	1.230 1.190
11	2.750 Support	0.010Inches	+ 0.010 - 0.000	0.020 0.010
12	2.750 Support	0.053Inches	+ 0.020 - 0.000	0.073 0.053
13	2.750 Support	0.240Inches	+ 0.020 - 0.000	0.260 0.240
14	2.750 Support	2.518Inches	+ 0.020 - 0.000	2.538 2.518
15	2.750 Support	84.390Inches	+ 6.000 - 0.000	90.390 84.390
16	2.750 Support	0.261Inches	+ 0.005 - 0.000	0.266 0.261
17	2.750 Support	0.053Inches	+ 0.020 - 0.000	0.073 0.053

Plex 3/6/18 12:52 PM Dart.lajeunesse.marie

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : _____					

DART AEROSPACE LTD		Work Order: 173 685
Description: Ø2.750 Support		Part Number: D2893-1
Inspection Dwg: D2893	Rev: C	Page 1 of 1

FIRST ARTICLE INSPECTION DIMENSION SHEET

				Record Actual Dimensions				
Dim	Min	Max	Go/No Go Gauge	1	2	3	4	5
HAAS Section								
AA	2.985	3.005		2.992	2.993	2.993	2.988	2.992
AB	0.440	0.460		0.450	0.440	0.450	0.450	0.450
AC	0.125	0.160		0.145	0.128	0.136	0.130	0.126
AD	0.040	0.060		0.050	0.048	0.048	0.049	0.050
AE	0.188	0.193		0.188	0.188	0.188	0.188	0.188
AF	0.125	0.160		0.147	0.140	0.140	0.148	0.150
AG	0.140	0.160		0.155	0.150	0.150	0.1465	0.146
AH	1.360	1.400		1.377	1.378	1.376	1.366	1.376
AI	0.040	0.060		0.050	0.05	0.050	0.050	0.046
AJ	1.190	1.230		1.222	1.222	1.221	1.296	1.222
AK	0.010	0.020		0.015	0.015	0.015	0.015	0.015
AL	0.053	0.073		0.063	0.063	0.063	0.063	0.063
AM	0.240	0.260		0.250	0.250	0.250	0.250	0.250
AN	2.518	2.538		2.520	2.520	2.520	2.520	2.529
AO	84.38	88.39		84.39	84.39	84.39	84.39	84.39
AP	0.261	0.266		0.261	0.261	0.261	0.261	0.261
AQ	0.053	0.073		0.063	0.063	0.063	0.063	0.063
AR	AD R87.39 ± 3			87.39	87.39	87.39	87.39	87.39
AS								
AT								
Accept/Reject				✓	✓	✓	✓	✓

Measured by: SBL 18/03/17 **Date:**

Audited by: [Signature] **Date:** 18/03/18

Preliminary Approval: **Date:**

Rev	Date	Change	Revised by	Approved
A	02.12.13	New Issue	KJ/RF	
B	07.05.08	Dimension AP revised	KJ/JLM	
C	08.04.21	Reformat	KJ/JLM	
D	12.07.31	Dwg Rev updated	KJ	[Signature]

DART AEROSPACE LTD		Work Order: 173 685
Description: Ø2.750 Support		Part Number: D2893-1
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FIRST ARTICLE INSPECTION DIMENSION SHEET

				Record Actual Dimensions				
Dim	Min	Max	Go/No Go Gauge	1	2	3	4	5
HAAS Section								
AA	2.985	3.005		2.991	3.003	3.003	3.003	3.003
AB	0.440	0.460		.450	.450	.455	.445	.450
AC	0.125	0.160		.133	.136	.135	.134	.136
AD	0.040	0.060		.049	.050	.052	.050	.047
AE	0.188	0.193		.188	.188	.188	.188	.188
AF	0.125	0.160		.143	.140	.143	.143	.143
AG	0.140	0.160		.152	.145	.150	.152	.150
AH	1.360	1.400		1.373	1.377	1.374	1.378	1.377
AI	0.040	0.060		.050	.050	.050	.048	.050
AJ	1.190	1.230		1.218	1.212	1.211	1.218	1.215
AK	0.010	0.020		.015	.015	.015	.015	.015
AL	0.053	0.073		.063	.063	.063	.063	.063
AM	0.240	0.260		.250	.250	.250	.250	.250
AN	2.518	2.538		2.526	2.531	2.530	2.530	2.532
AO	84.39	90.39		87.39	87.39	87.39	87.39	87.39
AP	0.261	0.266		.261	.261	.261	.261	.261
AQ	0.053	0.073		.063	.063	.063	.063	.063
AR								
AS								
AT								
Accept/Reject				✓	✓	✓	✓	✓

Measured by: SBL	Date: 18/03/17
Audited by: [Signature]	Date: 18/03/18
Preliminary Approval:	Date:

Rev	Date	Change	Revised by	Approved
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